



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

JAN 17 2018

DAS
13
9-89

646.9410

Job Sheet 170483



100

Part No: 646.9410

Job Qty: 16 ea

Part Name: Shim



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 1/16/18

Job Tracking No:

Created By: Linda Lacelle

Due Date: 2/8/18

Type: SOLD

Description:

Note: DWG REV NC IPP REV:A 16.01.08 NEW ISSUE DD VERF:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Purchasing	16 pcs		2/8/18	0.00	0.00	Purchasing		APR 18/03/18
110	Packaging	16 pcs		2/8/18	0.00	0.00	Packaging2		APR 18/03/18
120	QC	16 pcs		2/8/18	0.00	0.00	QC6		11 APR 03 2018
130	Packaging	16 pcs		2/8/18	0.00	0.00	Packaging3-1		APR 05 2018
140	QC21-SA	16 Ea		2/8/18	0.00	0.00	QC21		21 APR 11 5 2018

Part Op 110 - Receive & Inspect for Damage & Mat'l Certs
Descriptions: 120 - QC6- All purchased or subcontracted products
130 - Identify as per dwg & Stock Location:
140 - QC21- Final Inspection - Work Order Release

PO 038807

JAN 17 2017

2018

Job Allocations

Operation	Component Part	Required	Inventory	Allocated	Std Qty
100-Purchasing	646.9410P	16	0	0	0

Part Specifications

Specifications could not be found.

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION		AGAINST DEPARTMENT/PROCESS					
	Rework ☐	Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐			
	Scrap ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐			
	Use-as-is ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐			
	Suspected Unapproved ☐	Large Fab ☐	Composite ☐	Supplier ☐				

Date : _____ Step #: _____ QTY Effective : _____ MRB (QSI042) Approval _____

Description

Job No: 170483
Mfg Date: 03/29/18

Change No:
Operation:
Revision:
Serial No/Batch: S056998
PART NO: 646.9410
Packaging

Completed By _____

Lead hand / Supervisor
Approval Verification _____

QC / QA Coordinator
Approval _____



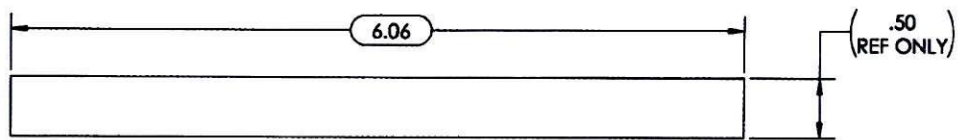
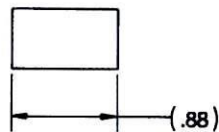
Root Cause

Environment ☐	No Re-vericat ☐			Positioned Wrong ☐
Design ☐	Operator ☐			Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐			Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐			Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crush/tear/nipple/wave ☐	Inspection incomplete/unqualified ☐	Wrong Stock Pulled ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐
Past Expiry Date ☐	Manufacturing Process ☐			Turning Sequence ☐
Misidentified ☐	Past Due ☐	OTHER : _____		

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.

NOTES:

- 1 MATERIAL: LAMINATED ALUMINUM 1100 ALLOY
SHIM STOCK WITH .003" LAYER THICKNESS,
1100-H19 PER QQ-A-250/1.
- 2 FINISH: NONE.
- 3 IDENTIFY PER MPP-120. BAG AND TAG.
- 4 0.50" DIMENSION IS FOR REFERENCE ONLY.
SHIM TO BE SIZED AS NECESSARY FOR INSTALLATION.



REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
N/C	METAL RELEASE	12-07-15	P. BRAYO

1	1	646.9410	SHIM		
FIND #	PART #	DESCRIPTION	MAT'L	SPEC.	
QTY	PARTS LIST				
NEXT ASSY (S)	ORIGINAL DATE 646.4000	12/07/15 CHECKED J. BECKER J. GARDNER			
	DRAWING APPROVAL P. BRAYO	12/07/15	SHIM 3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760)-724-5300 APICAL INDUSTRIES, INC. DBA DART AEROSPACE		
	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.010 3 PLACE DECIMALS ±.005 ANGLES ± .3°		SHEET B	CAGE CODE 079426	DWG. NO. 646.9400
	SCALE NONE		REV N/C	SHEET 1 OF 1	



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

PO038807

Supplier: ALO001-VU
Aloma Shim and Manufacturing Co.
P.O.Box 246 Oakmont
PA, PA 15147 USA
Phone: 412-828-8660
Fax: 412-828-7280

PO No: PO038807

PO Date: 1/17/18

Due Date: 3/26/18

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Baker, Diane
Phone: dbaker@dartaero.com

E-MAILED
JAN 18 2018

Revised

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground

Pymt Terms: Net 30

Freight Terms:

Special Comments:

Items

Line Item	Part	Supplier Part No	Item No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1	646.9410P	R-6.06X.880XAL.500		Shim As per Dwg 646.9400	Firmed	3/26/18	100 pcs	0 pcs	100 pcs	\$10.24/pcs	\$1,024.00

Line Item Note job # 170483

Grand Total: \$1,024.00

Order Notes

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Procurement Quality Clauses

A005 RIGHT OF ENTRY

A007 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION MAINTAINED BY SUPPLIER)

A012 CHEMICAL AND PHYSICAL TEST REPORTS

A016 PERSONNEL QUALIFICATION

A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)

A026 CERTIFICATION OF MATERIAL CONFORMANCE

A041 QUALITY MANAGEMENT SYSTEM

A042 DART NOTIFICATION BY SUPPLIER

A043 RETENTION OF QUALITY DOCUMENT

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM

A049 SUPPLIER AWARENESS

CL
AB

Plex 1/18/18 3:04 PM Dart.Baker.Diane

Inspection Report

Part Information

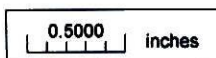
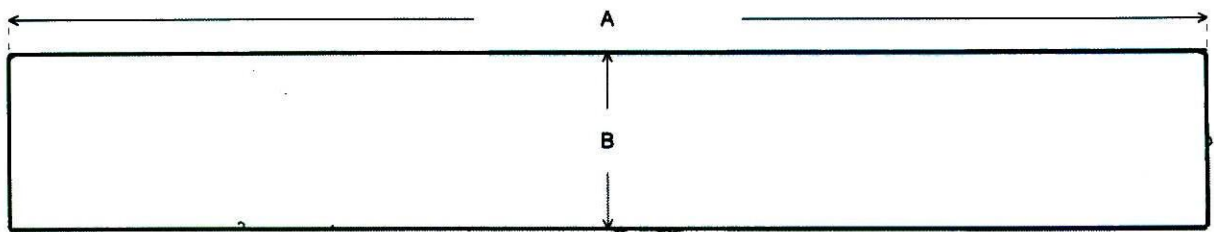
Part: R-6.06X.880
Customer: DART AEROSPACE
Programmer: SSP
Company: Aloma Shim & Mfg.
Filename: O:\Dart Aerospace\111435-1-1.iip
Default thickness: 0.5000
Material: Aluminum - low tensile strength, Water jet, Blow out: 0.0100

Measurement Results

Operator: DMW2110
Serial #: 111435-1-1
Scan time: Mar 19, 2018 11:34:20
Actual thickness: 0.5000
Units: inches

Pass: 2 Fail: 0 Missing: 0

ID	Dimension	Nominal	Tolerance	Actual	Deviation	Status
A	Distance	6.0600	+/-0.0300	6.0560	-0.0040	P
B	Distance	0.8800	+/-0.0300	0.8924	0.0124	P





PO Box 246 Oakmont, Pa. 15139 Toll Free: 1-800-736-7662 Fax: 412-828-7280
www.aloma.com E-mail: sales@aloma.com

Certificate of Conformance

Date: March 23, 2018

Customer: Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7 Canada

Reference: PO# PO038807

Item: Shim, .500 Thick

Material: Comp 1=Aluminum 1100H19, Type 1=All Laminated
Class 2=.003 Laminations

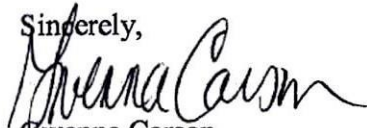
Part # 646.9410P

Quantity: 100 pcs

Country or Origin: USA

This document hereby certifies that the above referenced item was manufactured in accordance with Aloma Quality Manual dated 09/30/16 Rev C and conforms to the referenced purchase order requirements.

Sincerely,


Gwenna Carson
Quality Coordinator

Dart Aerospace PO 038807

3-23-18
- 3 pgs-

TK Innovation, Inc.

3 Industrial Park Dr., PO Box 6583 Wheeling, West Virginia 26003
ph (304) 639-7885 fax (304) 232-1766 tkinnovation1@verizon.net
www.tkishims.com

Certificate of Conformance

Customer: Aloma Shim & Manufacturing Date: 1/22/2018
Purchase Order: 49192
Item: 1 of 2 Order Control No. 9596
Quantity: 1
Part Number: 112.50024x48
Composition:

1 Aluminum 1100H19
1
2
.500"

 Specification:

AMS-DTL-22499

Type
Class
Thickness

PO	LOT	MILL
ST1223163AL	44246055	JW Aluminum

* The material used in the manufacture of the above product complies with DFARS edition 1998, section 252.225.7001, -7007, -7009, -7012, and -7014.

* Where applicable, material currently complies with the requirements of REACH and RoHS.

* DRC Conflict Free.

* Product has been manufactured in the United States of America.

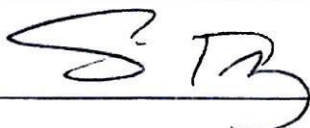
* TKI complies with the regulations of ITAR and does not share any controlled information and/or materials with any non-US person or group.

* TKI Production, Storage, and Testing Facilities are free of Mercury contamination.

Notes: _____

This is to hereby certify that this item has been manufactured, tested and accepted in accordance with the designated specification and contract purchase order.

All relevant test results and documentation are available for review upon request.

Authorized Signature: 



Williamsport Operations
2475 Trenton Avenue
Williamsport, PA 17701

Certification of Analysis

Customer : Tk Innovation Inc
Part Number: 3000006994
Description: 1100_H19_0.003_24_BARE_MILL FINISH_DFARS_
Sales Order : 4011222
Customer PO#: ST1223163AL

This certifies that the material, processing, and testing used in fabrication of this product meets the requirements of the purchase order and the Aluminum Association Standards.

Additional applicable Industry standard(s) as listed below:

Applicable For Material On Delivery# 4309767

LPN	Lot Number	Parent Lot
DS01022142	44246055-7	44246055
DS01022141	44246055-8	44246055
DS01022142	44246055-8	44246055
DS01022139	44246055-1	44246055
DS01022144	44246055-11	44246055
DS01022141	44246055-5	44246055
DS01022140	44246055-4	44246055
DS01022140	44246055-3	44246055
DS01022139	44246055-2	44246055
DS01022146	44246055-16	44246055
DS01022146	44246055-15	44246055
DS01022144	44246055-12	44246055

DFARS 225.1

Chemical Analysis Of Alloy

	Si	Fe	Si+Fe	Cu	Mn	Mg	Ti	Zn	V	Al	Others (Max Ea.)	Others (Total)
13643025	0.134	0.557	0.691	0.133	0.005	0.000	0.017	0.003	0.010	99.16		

Mechanical Properties

	Tensile (Ksi)
44246055	30.9

April 19, 2017

Page 1 of 2

P.O. ST1223163AL Lot 44246055

Dimensional Test Of Items

	AVG_GAUGE
44246055-1	0.002962
44246055-11	0.002969
44246055-12	0.002969
44246055-15	0.002961
44246055-16	0.002961
44246055-2	0.002962
44246055-3	0.002957
44246055-4	0.002957
44246055-5	0.002958
44246055-6	0.002958
44246055-7	0.002959
44246055-8	0.002958

Additional Specification for 3000006994 item is -DFAR's and Chemistry as established by ASTM B209 rev.14

April 19, 2017

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P.O. ST1223163AL Lot 44246055